

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (Currently Amended): A method for maintaining the force delivered by a variable reluctance motor including at least one phase coil, the method comprising the steps of:

sensing a speed of said variable reluctance motor; and

varying the inductance of said phase coil based on said sensed speed, wherein said varying the inductance step comprises changing the number of turns of said phase coil from a first number of turns to a second number of turns.

Claim 2. (Cancelled)

Claim 3. (Cancelled)

Claim 4. (Previously Presented) The method of claim 1, wherein the step of varying the inductance of said phase coil is carried out when said sensed speed reaches a reference speed.

Claim 5. (Previously Presented) The method of claim 1, wherein the step of varying the inductance of said phase coil is carried out when said sensed speed is about the speed at which saturation of a core of a phase coil of said variable reluctance motor occurs.

Claim 6. (Previously Presented) The method of claim 1, wherein the step of varying the inductance of said phase coil occurs at approximately the motor speed at which the motor force

corresponding to a first number of turns (T1) of said phase coil is about the same as the motor force corresponding to a second number of turns (T2) of said phase coil.

Claim 7. (Amended) The method of claim 1 further including a step of compensating said variable reluctance motor for said varying inductance of said phase coil.

Claim 8. (Cancelled).

Claim 9. (Cancelled).

Claim 10. (Cancelled).

Claim 11. (Previously Presented) In a motor system including a variable reluctance motor having at least one phase coil, said system comprising:

a sensor coupled to said variable reluctance motor, said sensor providing a feedback signal representative of a speed of said variable reluctance motor between at least a low range and a high range;

a comparing circuit for comparison of said feedback signal to a reference signal and for providing a switching signal based on results of said comparison; and

a switch coupled to said comparing circuit and responsive to said switching signal such that the number of turns of said phase coil is changed from a higher number of turns for said low range to a lower number of turns for said high range, whereby the force delivered by said variable reluctance motor is maintained.

Claim 12. (Previously Presented) A motor system including a variable reluctance motor comprising at least one phase coil having a first number of turns, said system further comprising:

- a motor speed sensor coupled to said variable reluctance motor for sensing a speed of said variable reluctance motor;
- a switch coupled to said phase coil of said variable reluctance motor; and
- a driving circuit coupled to said motor speed sensor and to said switch such that said switch changes the number of turns of said phase coil from said first number to a second number when said speed of said variable reluctance motor reaches a reference value, whereby the force delivered by said variable reluctance motor is maintained.

Claim 13 (Cancelled).